AMENDMENTS TO THE CLAIMS

Cancel claims 9-11 without prejudice.

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method comprising:

performing at least part of a digital subscriber line handshaking process by transmitting at least one handshaking signal to or from a DSL modem via a telephone subscriber loop; and

analyzing the at least one handshaking signal to detect an estimated length of the telephone subscriber loop;

wherein the analyzing includes calculating a ratio of a power spectrum density of upstream signal carriers to a power spectrum density of downstream signal carriers, and the analyzing further includes calculating a ratio of a power spectrum density of a first group of downstream signal carriers to a power spectrum density of a second group of downstream signal carriers.

2. (previously presented) The method of claim 1, further comprising:

determining an operating function of an item of terminal equipment connected to the telephone subscriber loop based at least in part on the estimated length of the telephone subscriber loop.

3. (original) The method of claim 2, wherein the determining includes determining whether to perform trellis coded modulation in the item of terminal equipment.

4. (canceled)

5. (previously presented) The method of claim 3, wherein it is determined not to perform trellis coded modulation in the item of terminal equipment if the estimated length of the telephone subscriber loop is less than a predetermined length.

6. (original) The method of claim 5, wherein the item of terminal equipment is a digital subscriber line modem.

7-11. (canceled)

12. (previously presented) The method of claim 1, further comprising:

determining, based at least in part on the estimated length of the telephone subscriber loop, a parameter for a digital subscriber line training process.

13. (original) The method of claim 12, wherein the determined parameter is used for one of (a) an equalizer function, (b) a timing recovery function, and (c) an automatic gain control function.

14. (previously presented) The method of claim 1, further comprising:

predicting a digital subscriber line service data rate for the telephone subscriber loop on the basis of the estimated length of the telephone subscriber loop.

15-19. (canceled)

20. (currently amended) An apparatus comprising:

a memory;

a processor coupled to the memory to:

receive at least one handshaking signal transmitted to or from a DSL modem via a telephone subscriber loop in connection with a digital subscriber line handshaking process; and

analyze the at least one handshaking signal to detect an estimated length of the telephone subscriber loop;

wherein the analyzing includes calculating a ratio of a power spectrum density of upstream signal carriers to a power spectrum density of downstream signal carriers, and the analyzing further includes calculating a ratio of a power spectrum density of a first group of downstream signal carriers to a power spectrum density of a second group of downstream signal carriers.

21. (canceled)

22. (previously presented) The apparatus of claim 20, wherein the processor is also to determine not to perform trellis coded modulation if the estimated length of the telephone subscriber loop is less than a predetermined length.

23. (currently amended) An apparatus comprising:

means for receiving at least one handshaking signal transmitted to or from a DSL modem via a telephone subscriber loop in connection with a digital subscriber line handshaking process; and

means for analyzing the at least one handshaking signal to detect an estimated length of the telephone subscriber loop;

wherein the analyzing includes calculating a ratio of a power spectrum density of upstream signal carriers to a power spectrum density of downstream signal carriers, and the analyzing further includes calculating a ratio of a power spectrum density of a first group of

downstream signal carriers to a power spectrum density of a second group of downstream signal carriers.

24. (canceled)

25. (previously presented) The apparatus of claim 23, further comprising:

means for determining not to perform trellis coded modulation if the estimated length of the telephone subscriber loop is less than a predetermined length.

26. (currently amended) An apparatus comprising:

a storage medium having stored thereon instructions that when executed by a machine result in the following:

receiving at least one handshaking signal transmitted to or from a DSL modem via a telephone subscriber loop in connection with a digital subscriber line handshaking process; and

analyzing the at least one handshaking signal to detect an estimated length of the telephone subscriber loop;

wherein the analyzing includes calculating a ratio of a power spectrum density of upstream signal carriers to a power spectrum density of downstream signal carriers, and the analyzing further includes calculating a ratio of a power spectrum density of a first group of downstream signal carriers to a power spectrum density of a second group of downstream signal carriers.

27. (canceled)

28. (previously presented) The apparatus of claim 26, wherein the instructions stored on the storage medium, when executed by a machine, also result in:

determining not to perform trellis coded modulation if the estimated length of the telephone subscriber loop is less than a predetermined length.

29-40 (canceled)

41. (currently amended) A system comprising:

a radio frequency transceiver; and

a digital subscriber line modem coupled to the radio frequency transceiver, the digital subscriber line modem including:

a memory;

a processor coupled to the memory to:

receive at least one handshaking signal transmitted to said digital subscriber line modem via a telephone subscriber loop in connection with a digital subscriber line handshaking process; and

analyze the at least one handshaking signal to detect an estimated length of the telephone subscriber loop;

wherein the analyzing includes calculating a ratio of a power spectrum density of upstream signal carriers to a power spectrum density of downstream signal carriers, and the analyzing further includes calculating a ratio of a power spectrum density of a first group of downstream signal carriers to a power spectrum density of a second group of downstream signal carriers.

42. (canceled)

43. (previously presented) The system of claim 41, wherein the processor is also to determine not to perform trellis coded modulation if the estimated length of the telephone subscriber loop is less than a predetermined length.

44-47. (canceled)